ENVIRONMENTAL CHEMISTS

Date of Report: 12/16/97 Date Received: 12/11/97

Project: Metro Self Monitor, PO #M59373

Date Samples Extracted: 12/11/97 Date Extracts Analyzed: 12/11/97

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, ZINC USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

Sample ID	Chromium	Copper	<u>Nickel</u>	Zinc
M59373	0.41	0.28	0.44	0.11
Method Blank	< 0.05	< 0.05	< 0.05	< 0.05

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QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 712013-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria		
Chromium	mg/L (ppm)	0.34	0.34	0	0-20		
Copper	mg/L (ppm)	0.21	0.22	5	0-20		
Nickel	mg/L (ppm)	0.39	0.42	7	0-20		
Zinc	mg/L (ppm)	< 0.05	< 0.05	nm	0-20		

Laboratory Code: 712013-01 (Matrix Spike)

	Reporting	Spike	Sample	% Recove	ry % Recovery	Acceptance	
Analyte	Units	Level	Result	MS	MSD	Criteria	RPD
Chromium	mg/L (ppm)	5	0.34	103	106	80-120	3
Copper	mg/L (ppm)	5	0.21	104	107	80-120	3
Nickel	mg/L (ppm)	10	0.39	103	103	80-120	0
Zinc	mg/L (ppm)	5	< 0.05	102	105	80-120	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recover LCSD	ry Acceptance Criteria	e RPD	
Chromium	mg/L (ppm)	5	108	104	80-120	4	100
Copper	mg/L (ppm)	5	108	106	80-120	2	
Nickel Zinc	mg/L (ppm) mg/L (ppm)	10 5	107 106	104 104	80-120 80-120	3 2	

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282

PJ#712046

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#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

December 16, 1997

#### **DUPLICATE COPY**

#### **INVOICE #97ACU1216-2**

Accounts Payable Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

RE: Project Metro Self Monitor, PO #M59373: Results of testing requested by Gerry Thompson for material submitted on December 11, 1997.

FEDERAL TAX ID (b) (6)

#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

December 16, 1997

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on December 11, 1997 from your Metro Self Monitor, PO #M59373 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson Chemist

Enclosures ACU1216R.DOC